TESTIMONY OF ROBERT L. FOUGERE

1. Q. Please state your name, business address, and position with respect to the petitioning company.

A. My name is Robert L. Fougere. My business address is 55 Bearfoot Road, Northborough, Massachusetts. I am a Lead Senior Engineer in the Substation Engineering Group for the National Grid Service Company (NGSCO), which performs engineering and other services for National Grid companies, and includes the petitioning company, New England Power Company (NEP). The department I work in is responsible for the engineering and project management needs for electrical substations within the system.

2. Q. Are you a Registered Professional Engineer in the Commonwealth of Massachusetts?

A. Yes, I am.

3. Q. Will you please outline your qualifications to testify on behalf of New England Power Company in this case?

A. I have a Bachelor of Science degree in Electrical Engineering with a concentration in power systems from Northeastern University in Boston, Massachusetts. I've worked as a Substation Engineer for NGSCO since July 1990. Prior to that, I worked as a Material Engineering Coordinator for Stone & Webster Engineering. In this position, I was assigned to

a nuclear power plant project in Detroit, Michigan. I also worked as an Electrician and Nuclear Power Plant Operator in The United States Navy for six years. I have held my current position as Lead Senior Engineer since April of 2001.

4. Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide equipment, structure, and land use descriptions that are subject to this exemption request.

5. Q. Have you submitted any exhibits with your testimony?

A. Yes, the exhibits are marked RLF-1 through RLF-7.

6. Q. Were these exhibits prepared by you or others under your direction?

A. Yes, they were.

7. Q. Referring to your exhibits, for the purpose of illustration, will you describe for the record the proposed additions to the Salem Harbor Station Switchyard?

A. NEP's proposal is to install two 115 kV, 63 MVar capacitor banks at the Salem Harbor Station Switchyard located at 24 Fort Avenue in Salem, Massachusetts. RLF-1 is an aerial photo of the Salem Harbor Station. It displays the relationship of the switchyard to Salem Harbor and the city itself. RLF-2 is a recent site survey of the station which includes the switchyard. This drawing shows the property boundaries, existing

structures, and other use areas at the site. RLF- 3 is a general layout drawing. It illustrates the assets of the generation company (US Generating NE, Inc. or "USGen") and those of NEP, the transmission company, the easements obtained by NEP for both substation and transmission use, and the proposed additions for the capacitor bank installation. It illustrates the 4kV assets of NEP's affiliated distribution company, Massachusetts Electric Company (MECO) as well. As you can see from drawing RLF-3, the structures for the new 115 kV bay will be of the same dimensions as the existing 115 kV bays (110ft x 40ft). The structures identified as CAP BANK 1 and CAP BANK 2 on the drawing will be located approximately 100 feet northwest of the new fifth bay. The dashed lines that connect the two structures represent the underground 115 kV cables. In the new bay, we plan to install 115 kV, 3000 amp circuit breakers and switches and 115kV instrument transformers. This equipment will be connected to the 115kV electrical buses (1 & 2) and to the new 115kV, 63 MVar capacitor banks via the underground cables. The capacitor banks with their associated reactors and switches are planned to be installed within the existing USGen parking lot in a mutually agreed upon area designated as substation easement property. The underground cables needed to connect the capacitor banks with the equipment in the fifth bay will be laid in new concrete trenches installed at surface grade. Equipment needed to protect, control, and monitor the capacitor banks will be installed in the switchyard control

house. Some of the control cables associated with these functions will be installed in separate conduits running parallel to the concrete trenches. RLF-4 depicts the electrical schematic one-line for this installation. RLF-5 and RLF-6 illustrate the physical electrical arrangement of the equipment being installed. As you can see by these exhibits, the fifth bay will contain two 115 kV circuit breakers with their associated switches, instrument transformers, and bus work. These breakers connect to underground cables in the middle of the bay. The other end of the underground cables rise up in the parking lot near the capacitor banks and connect to their associated equipment (switches, instrument transformers, and reactors). The fifth bay equipment and structures will require a switchyard fence expansion. The new fence section, as it does today, will have a padlocked gate and be accessible to authorized personnel only. The capacitor banks and its associated equipment will have a separate fenced area (7 – foot chain link topped with 3 three barbed wire strands) and padlocked gate for authorized persons only. This fencing arrangement complies with the requirements of the National Electrical Safety Code (NESC) and National Grid Construction Standards.

8. Q. How long due you anticipate the design and construction to take place and what hours of construction are planned?

A. From the final project design through facility commissioning, 20 months will be required to complete the project. Construction hours will be

between 7 am and 5 pm Monday through Friday; however, at times, it may be necessary to work outside of these time periods in order to minimize critical electrical equipment outages during construction.

9. Q. Will you please inform the Department as to the construction and operational standards to which these facilities are to conform?

A. These facilities will be built in accordance with the latest standards established by the NESC, the American National Standards Institute (ANSI), and the Institute of Electrical and Electronic Engineers (IEEE).

10. Q. The Department has recently received an exemption request from USGen that requires an expansion of the 115 kV switchyard to supply its proposed emissions control equipment. This expansion is in the same area as you describe. Please describe how NEP's proposed use will affect the USGen project.

A. USGen and NEP have been in discussions over both parties' proposed uses for several months. Exhibit RLF-7 is a general layout that depicts NEP's proposed use and NEP's current understanding of USGen's proposed use superimposed on it. Sufficient space is available for NEP to build its fifth 115 kV bay and still provide room for USGen's two 115 kV electrical supplies. From the last meeting between the parties, USGen will draft a memorandum that should describe how the two parties' designs will accommodate the two proposed uses. Questions surrounding the location

of USGen's equipment, gates, and driveways on NEP's substation and/or transmission easements still need discussion, but the coexistence of the two projects does appear to be technically feasible.

11. Q. Are you aware of the need for zoning exemptions to accommodate NEP's project?

A. Yes. I have been advised by counsel that portions of the City of Salem zoning ordinances may impose a special permit and code exemption requirements on NEP for this project.

12. Q. Does this complete your direct testimony?

A. Yes, it does.